

Embracing technology and innovation to drive sustainability in the property sector

By <u>Frikkie Malan</u> 23 May 2023

In a world increasingly affected by climate change and its devastating consequences, business leaders across various industries are responsible for integrating sustainability goals into their operational systems. These consequences manifest as hurricanes in the US, heatwaves in the UK, and flooding in Pakistan, further emphasising the need for a global shift towards sustainability.



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The urgency of this transition was highlighted during COP27, the recent United Nations climate change conference held in Sharm el-Sheikh, Egypt. South Africa's private property sector plays a significant role in this transition, with numerous building owners taking decisive steps to reduce carbon emissions and contribute to a greener future.

The pursuit of sustainability has become a top priority for businesses worldwide in recent years. Faced with pressure from an environmentally conscious clientele, public and private sectors must clearly outline their sustainability goals and take concrete actions to achieve them. However, many South African companies struggle with moving from setting goals and strategies to taking demonstrable action and delivering tangible results. This is where technology and innovation can play a pivotal role in bridging the gap between intention and action.

To effectively implement sustainability measures, decision-makers must have access to accurate, relevant, and comprehensive data. While it has been difficult to rapidly translate sustainability-related data into actionable insights, the right technology solutions can enable this process at scale. For example, artificial intelligence (AI) and machine learning can be utilised to meet sustainability goals by capturing data close to the source, analysing it in real time, and feeding it back to the data centre for strategic decision-making. This data-driven approach can guide organisations in identifying the most impactful sustainability interventions, helping them optimise their efforts and resources.

Smart metering technology

Moreover, smart metering technology can measure and monitor vital aspects of building operations, such as energy consumption, water usage, and waste generation. As a result, the smart metering infrastructure will deliver valuable data, which, coupled with AI-powered analytics, will provide valuable insights into building performance, and help identify areas where building environmental performance can improve. These insights allow property owners and managers to implement targeted interventions and track their progress toward sustainability goals.

In addition to data-driven solutions, renewable energy technologies, such as solar and wind power, can help property owners achieve their sustainability targets. As the costs of solar panels and wind turbines continue to decrease, these renewable energy sources are becoming more viable alternatives to traditional fossil fuels. Furthermore, advancements in energy storage solutions, particularly lithium-ion batteries, are making it increasingly feasible for buildings to store and utilise renewable energy generated on-site.



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More buildings to move off-grid

Although renewable energy technologies are still relatively expensive, they are expected to soon reach parity with fossil fuel-based solutions, allowing more buildings to move off-grid or rely on a hybrid energy system. This transition will contribute to reducing carbon emissions and result in long-term financial savings for property owners as they become less dependent on volatile energy markets.

Green building materials and practices are also gaining traction in the property sector. Using environmentally friendly, energy-efficient, and recycled materials in construction projects can significantly reduce a building's environmental impact while improving indoor air quality and occupant well-being. In addition, integrating green spaces and water-saving features, such as rainwater harvesting systems and greywater recycling, can further enhance a building's sustainability performance.

Intelligent building management systems

Another area where technology can support sustainability efforts in the property sector is through intelligent building management systems. These systems integrate various building functions, such as lighting, heating, ventilation, air conditioning (HVAC), security, and access control, into a centralised platform. By leveraging AI and data analytics, intelligent building management systems can optimise building performance, reduce energy consumption, and improve occupant comfort, all while contributing to a lower carbon footprint.

metering, these objectives are achievable and will deliver attractive returns on investment.

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